the disease completely is shown by its continued presence in those countries. The best that can be expected of this method is to limit the spread of the disease as much as possible.

## Heavy Toll of the Disease Abroad

Though the cost of eradicating foot-and-mouth disease from the United States has been considerable, the amount is very small compared to the economic loss that would result if the disease should become established here. Statistics on the losses resulting from the epizootic of foot-and-mouth disease that swept over a large portion of Europe between 1918 and 1921 show the toll that the disease may exact in countries where it is enzootic. The direct loss to the livestock industry in Germany in the years 1920 and 1921 has been estimated to be about \$119,000,000, which does not include losses caused by disruption of business because of quarantine restrictions.

In Switzerland the losses from this epizootic, for the period from 1919 to 1921, were reported to be about \$70,000,000. These figures are especially significant in view of the fact that the number of susceptible animals in Switzerland at that time was less than one-fiftieth of the number in the United States and that the area of that country is

only about one-tenth that of the State of California.

## Importance of Excluding the Malady

Some idea of the losses that the disease would cause in this country if it once became established can be gathered from the foregoing figures. Foot-and-mouth disease has appeared in the United States on eight different occasions; each time it was eradicated by means of the stamping-out method. The cost of eradication work for all these outbreaks was about \$20,000,000. When this amount, spread over a period of more than 50 years, is compared to the losses caused by the disease in Germany and Switzerland over a period of only 2 years, the economy of the slaughter method is readily appreciated and the importance of preventing the disease from gaining a foothold in the country is realized.

Until science supplies new methods of combating this scourge, the stamping-out or slaughter method is the one that the United States must rely on in eradicating any future outbreaks of the disease, with the knowledge that it is the surest and most economical method known to-day.

This is the opinion of all having expert knowledge on the subject and is concurred in by the United States Department of Agriculture foot-and-mouth-disease commission after an extensive study of the disease and methods for its control in European countries.

H. W. Schoening.

ORECLOSURE Rate in Farm Realty Still Heavy in 1927-28

The last farm real estate survey made by the Bureau of Agricultural Economics shows encouraging declines in "forced" sales of land during the 12

months ended March 15, 1928. Chief among these declines were lower rates recorded in the Dakotas and Montana, where losses had been among the highest in the country. The improvement extended

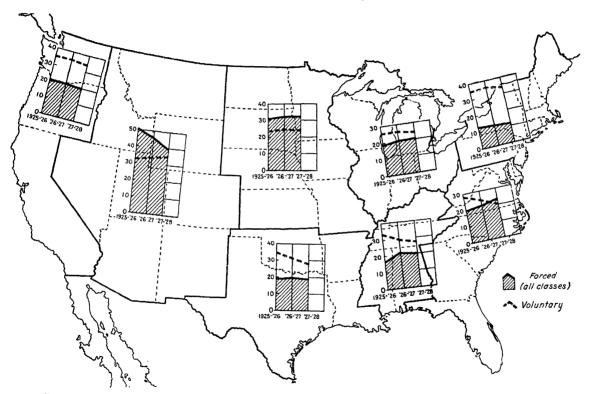


FIGURE 93.—The rate has been smallest in the northeast and largest in the west North Central and Mountain State

to virtually all the States of the far West. A downward tendency was likewise evident among some, but not all, of the nine Northeast States. In the States of the South and Middle West, forced sales did not show any general declining tendency over the 3-year period for which information is available. Here and there they have even crept upward, as for example, in Indiana, Illinois, and Iowa. Involuntary transactions of all kinds, including "deeding back," are included.

Generally speaking, the forced-sale rate remains high. For the last three surveys it has averaged 23 farms per thousand for the United States. About a third of all transfers have been forced sales. The rate has been smallest in the Northeast, with approximately 8 to 9 farms per 1,000, and largest in the West North Central States, with almost 32 per 1,000, and in the mountain section, with almost 45 (fig. 93). How far above pre-war these rates are can not be told for lack of comparable data. The number of farm bankruptcy cases concluded in the courts during the last few years has averaged from seven to nine times the pre-war rate.

## Voluntary Buying Low

Voluntary buying remains generally low, and during the three years even dropped somewhat for the country as a whole, from 30 farms per thousand in 1925–26 to 28 in 1926–27 and to only 26 in 1927–28. The only area of much improvement was in the Dakotas, Montana, Wyoming, and Idaho, where voluntary buying increased while forced sales declined, and an encouraging tendency developed toward steadiness in values. How far below normal voluntary buying is, is uncertain, but a rate of about 17 per thousand for 1927–28 in Iowa, compares with an estimate of 60 once made as the pre-war Iowa normal. Disparity is also indicated by the fact that the States of the Middle West which ordinarily enjoy land markets among the most active in the country have, in recent years, shown rates much below other sections which ordinarily have less active markets. Iowa, for example, had a rate of 17 farms per thousand, Minnesota and Wisconsin had 18, and Illinois had 20, but in 1927–28 only four other States in the entire country fell as low as 20.

A complete table of the results of these surveys is given in this Yearbook.

E. H. WIECKING.

POREST-FIRE Fighting
With a Power Pump
Is Found Effective

Are gasoline motor-driven pumps effective in controlling forest fires? A small woods fire in southern Massachusetts on a 1928 May day brought

under control by the use of such a pump was convincing evidence of their effectiveness under the conditions encountered. The fire occurred at the height of the spring forest-fire season, which means warm cloudless days and a low relative humidity. Given a good start, spring fires in this portion of New England have covered 1,000 to 3,000 acres of land in the course of an afternoon. The area in which the fire occurred was grown up to chestnut and oak sprouts, gray birch, northern white pine, and pitch pine. There was also some meadow covered with dry grass.

A Massachusetts district forest warden got a call for this fire just as he had finished another job a mile or so distant. He had good equip-